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For research use only

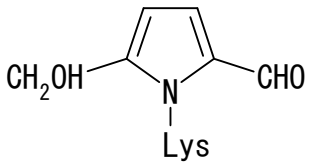
# Advanced Glycation End Products （AGEs）
# Anti Pyrraline Monoclonal Antibody （Clone No.H12）

Reaction of protein amino groups with glucose leads, through the early products such as a Schiff base and Amadori rearrangement products, to the formation of advanced glycation end products (AGEs). Recent immunological studies using anti-AGEs antibody (6D12) demonstrated the presence of AGEs-modified proteins in several human tissues: (ⅰ) human lens (nondiabetic and noncataractous), (ⅱ) renal proximal tubules in patients with diabetic nephropathy and chronic renal failure, (ⅲ) diabetic retina, (ⅳ) peripheral nerves of diabetic neuropathy, (ⅴ) atherosclerotic lesions of arterial walls, (ⅵ) $\beta_2$-microglobulin forming amyloid fibrils in patients with hemodialysis-related amyloidosis, (ⅶ) senile plaques of patients with Alzheimer's disease, (ⅷ) the peritoneum of CAPD patients, (ⅸ) skin elastin in actinic elastosis, and (ⅹ) ceriod/lipofuscin deposits. These results suggest a potential role of AGEs-modification in normal aging as well as age-enhanced disease processes. This antibody named as 6D12 has been used to demonstrate AGEs-modified proteins in these human tissues, indicating potential usefulness of this antibody for histochemical identification and biochemical quantification of AGEs-modified proteins.

Pyrraline is one of the major Maillard compounds resulting from the reaction of glucose and amino coumpounds at slightly acidic pH. Using anti-pyrraline antibody, pyrraline was detected in sclerosed glomeruli from diabetic and normal old kidneys as well as in renal arteries with arteriosclerosis. Furthermore, it was detected in neurofibrillary tangles and senile plaques in brain tissue from patients with Alzheimer's disease.

| | |
|---|---|
| Package Size | 20 μg (80 μL/vial) |
| Format | Mouse monoclonal antibody 0.25 mg/mL |
| Buffer | Block Ace as a stabilizer, containing 0.1% Proclin as a bacteriostat |
| Storage | Store below –20℃.<br>Once thawed, store at 4℃. Repeated freeze-thaw cycles should be avoided. |
| Clone No. | H12 |
| Subclass | IgG1 |
| Purification method | The splenic lymphocytes from BALB/c mouse, immunized with pyrraline-HSA were fused to myeloma P3U1 cells. The cell line (H12) with positive reaction was grown in ascitic fluid of BALB/c mouse, from which the antibody was purified by Protein G affinity chromatography. |

Working dilution for immunohistochemistry: about 2 μg/mL; for ELISA: 0.1-0.5 μg/mL




Pyrraline

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【Reference】


1. Miyata S, Monnier V, (1992): Immunohistochemical detection of advanced glycosylation end products in diabetic tissues using monoclonal antibody to pyrraline, *J Clin Invest*. 89(4) : 1102-1112

2. Smith MA, Taneda S, Richey PL, Miyata S, Yan SD, Stren D, Sayre LM, Monnier VM, Perry G,(1994): Advanced Maillard reaction end products are associated with Alzheimer disease pathology. *Proc Natl Acad Sci USA* 91(12) : 5710-5714

3. Odetti P, Angelini G, Dapino D, Zaccheo D, Garibaldi S, Dagna-Bricarelli F, Piombo G, Perry G, Smith M, Traverso N, Tabaton M.(1998): Early glycoxidation damage in brains from Down's syndrome. *Biochem Biophys Res Commun* 243(3) : 849-851


*These references are Pentosidine's background, not examples of how Anti Pentosidine monoclonal antibody is used .

*This product was developed in conjunction with Meiji Milk Product Co., LTD.　Institute of Health Science


**Supplier**

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